

UNITED STATES DISTRICT COURT

DISTRICT OF MASSACHUSETTS

\_\_\_\_\_  
FIREMAN'S FUND INSURANCE COMPANY,  
As Subrogee of Hodan Properties, Inc.  
Plaintiff

Vs.

\_\_\_\_\_  
FIRE SYSTEMS, INC.,  
FIRE SUPPRESSION SYSTEMS OF  
NEW ENGLAND, INC.,  
PRO CON, INC.  
and BRIERE & PAQUETTE, INC. f/k/a  
PAQUETTE ELECTRIC CO., INC.,  
Defendants  
\_\_\_\_\_

CASE NUMBER 04-11578 PBS

**FIRE SYSTEMS, INC.'S EXPERT DISCLOSURE**

Pursuant to Fed. R. Civ. P. 26(a)(2), the defendant, Fire Systems, Inc., identifies the following persons who may be used at trial to present evidence under Rules 702, 703, or 705 of the Federal Rules of Civil Procedure:

Thomas Klem  
T.J. Klem and Associates  
24 Robert Road  
Stoughton, MA 02072

Mr. Klem is expected to testify in accordance with his report which is attached as **Exhibit**

1.

James J. Rogers  
220 Winyah Lane  
P.. Box 1379  
Vineyard Haven, MA 02568

Mr. Rogers is expected to testify in accordance with his report which is attached as

**Exhibit 2.**

FIRE SYSTEMS, INC.

By its Attorneys,

**MORRISON MAHONEY LLP**

/s/ Gordon L. Sykes

Gordon L. Sykes, BBO #555580  
10 North Main Street  
Fall River, MA 02720  
(508) 677-3100

**CERTIFICATE OF SERVICE**

I hereby certify that this document filed through the ECF system will be sent electronically to the registered participants as identified on the Notice of Electronic Filing (NEF) and paper copies will be sent to those indicated as non registered participants on May 1, 2006.

/s/ Gordon L. Sykes

# **EXHIBIT “1”**

## T. J. Klem & Associates

CONSULTING FIRE PROTECTION ENGINEERS  
CERTIFIED FIRE INVESTIGATORS

Thomas J. Klem  
email: tjklema@aol.com

November 28, 2003

Michael C. McDonnell, Jr.  
GAB Robins  
One Ellinwood Court  
New Hartford, New York 13413

Dear Mr. McDonnell:

You requested that T. J. Klem and Associates review the circumstances surrounding the sprinkler freeze that occurred at the Residence Inn by Marriott located at 181 Faunce Corner Road, North Dartmouth, MA.

A site visit was conducted on October 30, 2003 and Charles Barrett, the President of Fire Systems, Inc. was interviewed on November 6, 2003.

The following documents have been reviewed for this report:

1. Written statement by Charles Barrett from March 28, 2003
2. Contract between Fire Systems, Inc and the Residence Inn by Marriott
3. Fire Systems, Inc. Test / Inspection Report from November 20, 2002
4. Fire Systems, Inc. Test / Inspection Report from January 16, 2003
5. Expert report by Richard Papetti of GAI Engineers
6. Pictures taken by Richard Papetti
7. Fire Systems, Inc. Invoice dated November 29, 2002
8. Fire Systems, Inc. work order dated December 10, 2002
9. Fire Suppression Systems of N.E., Inc. work order dated January 19, 2003
10. Facsimile dated August 7, 2002 from Fire Suppression Systems of N.E., Inc. to Pro Con Construction providing system acceptance documentation
11. Letter from Charles Barrett to Michael McDonnell of GAB Robins
12. Automatic Sprinkler plans of the building
13. Fire alarm system printout from January 19, 2003

### National Fire Protection Association Standards and Recommended Practices:

NFPA 13, *Installation of Sprinkler Systems*, 2002 edition  
NFPA 25, *Inspection Testing, and Maintenance of Water-Based Fire Protection Systems*, 2002 edition

## BACKGROUND

On January 19, 2003 at approximately 5:00 PM water was observed leaking from the ceiling of Room 327 of the Marriott Residence Inn. Eventually a pull station, a portion of the built-in fire alarm system for the building, was activated and the Dartmouth Fire Department was automatically notified and responded to the scene. Upon their arrival, firefighters closed the main valve to the dry automatic sprinkler system and the water leakage ultimately stopped. Fire Suppression Services, Inc., the installer of the sprinkler system was called to the scene and determined the incident to be a freeze of some of the components of the system. They later repaired the frozen branch line. Others involved in the installation of the fire alarm system, also summoned to the scene, reportedly found that the "Low Air Pressure Switch" and the "Alarm Pressure Switch" for the dry system were wired incorrectly.

## DISCUSSION

Upon installation, sprinkler systems need to be hydrostatically tested. Additionally, dry systems need to be trip tested satisfactorily. Both of these tests result in water within the dry system that needs to be adequately drained at the conclusion of the testing. The adequate design and installation of automatic sprinkler systems facilitates the complete removal of water from the system through the main and other required drains.

Fire Systems, Inc. performed required maintenance inspections of the sprinkler system at the Residence Inn by Marriott on November 20, 2002 and January 16, 2003. Neither of their inspection reports corresponding to these dates indicates that Fire Systems, Inc. ever performed a dry valve trip test, i.e. water did not fill the dry system on these inspections. However, a portion of the alarm system was tested as required by their contract with the owners of the hotel and reportedly the main drain of the wet system was operated. In their contractual agreement with Marriott, it was agreed that the dry valve trip test of the dry sprinkler system would be performed annually. It is the practice of Fire Systems, Inc. to conduct this test in the spring or summer as suggested by NFPA 25 *Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, 2002 edition.

12.4.4.2.2 Each dry pipe valve shall be trip tested annually during warm weather.

Water was reported to have been seen by William Roland, the general manager of the Marriott Residence Inn, on the January 16<sup>th</sup> test date coming from the remote test station outlet. Upon review of the sprinkler plans, this stream of water was at the opposite end of the site where the drawings indicate that the inspector's test for the dry sprinkler system is located and the water seen flowing would have been from the testing of the wet sprinkler system.

It shall also be noted that during our site inspection a random sampling of approximately ten branch lines and cross mains was evaluated to determine the adequacy of their slopes

(pitch) to facilitate adequate drainage. Several dry sprinkler system lines/mains were found to be reversed pitched, some were established to have sufficient pitch, and others were concluded to have little or no pitch at all. The following excerpt is from NFPA 13 *Installation of Sprinkler Systems*, 2002 edition.

8.15.2.3.1 Dry Pipe Systems in Non-Refrigerated Areas. In dry pipe systems branch lines shall be pitched at least  $\frac{1}{2}$  in. per 10 ft (4mm/m) and mains shall be pitched at least  $\frac{1}{4}$  in. per 10 ft (2 mm/m).

The sprinkler lines that froze were found to have sufficient pitch at the time of our inspection. However, this is a moot point because it is not known if these branch lines were pitched correctly before the incident and the sprinkler lines had been replaced and proper pitch achieved at the time of our and others inspections.

The contract between Fire Systems, Inc. and Marriott states that "fire alarm and detection systems under this agreement shall have a random sampling of devices tested during each visit so that the entire system is tested at the end of each contract year." Logical testing of the alarm for the dry system would be during the annual dry valve trip test. The contract also asserts that "this agreement does not include any maintenance, repairs, alterations, or replacement parts unless otherwise specified in this agreement."

We have assessed the reported positions of electrical connections to the alarm devices for the dry system. In the reported position the devices would not sound the fire alarm system upon activation of the dry system, and would also not result in a "trouble signal" under normal operable conditions. Required acceptance testing of the fire alarm system at installation should have detected this installation defect. We have not been provided with such documentation/certification for the fire alarm system. Others have implied and have concluded that the low/high air pressure switch and the alarm pressure switch were rewired incorrectly by Fire Systems, Inc. They were not under contract to perform any repairs (etc.) to such devices and our review of their records show no charges for such work. Their records do indicate that they reported to the management of the hotel that during their routine testing of the fire protection systems for the building that a flow switch for the standpipe system was determined to have been wired incorrectly.

## CONCLUSIONS

There is no factual basis that Fire Systems, Inc. ever tripped the valve of the dry sprinkler system during any of their maintenance inspections. Their reporting of their maintenance to the system on two occasions, clearly reports that the dry valve was not tripped.


Considering the deficiencies in installation of the dry system found during our inspection, the water in the system that resulted in the freeze most likely was the result of the initial acceptance tests and inadequate system drainage performed by Fire Suppression Services, Inc. Again, several branch lines and cross mains were found to have insufficient pitches or reverse pitches, resulting in water being trapped in the sprinkler lines and not readily drained. Finally, the winter of 2003 was the first exposure of this dry system to freezing conditions.

The contract between Fire Systems, Inc. and Marriott called for a random sampling of alarms to be tested at each visit with the entire system being tested once a year. The most reasonable time to test the alarm on the dry sprinkler system would be during the dry valve trip test. This would have been performed during the spring or summer of 2003. Fire Systems, Inc. also would not have performed any repairs or alterations to the system as was suggested by others. We find their conclusion flawed. As an example, during their routine maintenance of the fire alarm and sprinkler systems, Fire Systems, Inc. found a deficiency in the wiring method of a flow switch for the standpipe system and reported it to the owners of the building. The lack of acceptance documentation of the fire alarm system at the time of installation, coupled with the deficiencies found both by Fire Systems and by others following this loss lead us to conclude that the wiring problems with the various fire alarm system devices most likely existed from the time of their installation. We know of no factual basis to conclude that any adjustments to alarm devices were made by Fire System personnel during their maintenance and testing of the fire protection systems at the Marriott.

Finally, several inconsistencies were noted with the reporting of the initial acceptance testing of the sprinkler system. Additionally, during the site visit it was observed that the air compressor for the dry sprinkler system was running excessively. We are obligated to report this condition and the condition of the improper pitch of the sprinkler piping within the attic to the owners of the property. Our inspection of the fire protection systems within the property was limited to areas concerned with this loss and thus other deficiencies may also exist to the systems.

Please let me know if you should have any questions regarding this report.

Sincerely,



Thomas J. Klem, MSCEPE, CFI  
Fire Protection Engineer

Thomas J. Klem, MScFPE  
Fire Protection Engineer  
24 Robert Road  
Stoughton, MA 02072  
(781) 344-1115

## Experience

- 1994- Present     T. J. Klem and Associates, Stoughton, MA  
Owner and principal engineer of full service fire protection engineering firm. Provides diverse clientele fire protection engineering assessments of fire losses and pre-incident hazards and develops operating procedures for loss prevention purposes. Examples of cases include equipment malfunctions, diffusion of flammable liquids and gasses, static electric ignition of substances, ignition and flame spread characteristics of materials and products and fire protection system performance. Application of fire protection engineering principles to diverse environments such as commercial aircraft and industrial processes. Provides analysis of fire and building code applicability. As Certified Fire Investigator, (CFI) provides fire origin, growth and spread determinations for a wide spectrum of occupancy fire losses, including cases involving arson. Appointed "fire expert" by chief federal judge to counsel and report on fire safety findings based on the analysis of a detention center within a high-rise building complex. Fire protection consultant to Arthur Anderson LLP, Business Fraud Risk Services. Lectures on fire protection engineering topics to various technical groups, including IAAI chapters throughout the country. As fire service liaison for the MA Chapter of the Society of Fire Protection Engineers, volunteers to assist local fire investigators on various fire protection engineering issues.
- 1982 - 1994     National Fire Protection Association, Quincy, MA  
Director, Fire Investigations (Chief Fire Investigator). Administered the association's aggressive fire investigations program. Analyzed technically significant fire occurrences and integrated results into ongoing association standards-making programs, resulting in meaningful changes in codes and advancement of the state of the art. Prepared and directed dissemination of technical reports to fire protection community. Integrated state-of-the-art technology into program and among key engineering staff. Selected to represent the association on technical matters to outside organizations including DOT Committee on aircraft Fire Safety, the media, and in testimony before the U.S. Congress. Frequent guest lecturer to fire protection community and federal law enforcement agencies.



Page 2: Curriculum Vitae of Thomas J. Klem

1976 - 1982      United States Fire Administration, Washington, D.C.  
Investigative Officer, National Fire Data Center and Office of the Administrator. Managed the Administration's major fires and applied research fire study programs. Selected to provide information and testimony to Congress and other government agencies regarding topical fire protection issues. Developed national fire investigative protocols for electrical fires, fires involving thermal insulation, and manufactured home fires.

1966 - 1976      Prince George's County Fire Department, Upper Marlboro, MD  
Served in various positions with steadily increasing responsibility, up to Executive Officer to the Fire Chief, accountable for department management and development of long-range planning. As Captain, Operations and Engineering Division, and Captain, Hazardous Materials Division, had responsibility for developing standard operating procedures and fire code enforcement and interpretation. Also served as firefighter, fire sergeant, fire inspector and fire investigator.

Education      B.A., University of Maryland, Fire Protection and Business  
M.S., Fire Protection Engineering, Worcester Polytechnic Institute  
Certified Fire Investigator (CFI), International Association of Arson Investigators (IAAI)

Memberships and Affiliations

Member, Society of Fire Protection Engineers  
Member, New England Chapter, Society of Fire Protection Engineers  
Member, International Association of Arson Investigators  
Member, National Fire Protection Association  
Member, NFPA Technical Committee on Telecommunications  
Chair, Fire Prevention, Pre-fire Planning and Emergency Response and Recovery  
Associate Member, International Association of Fire Fighters (IAFF),  
Local 1619, Retired, Prince George's County Fire Fighters

Significant Fire Investigations: See separate listing

Published Articles and Products: See separate listing

# T. J. Klem & Associates

CONSULTING FIRE PROTECTION ENGINEERS

Thomas J. Klem

## Published Articles

"Three Workers Die in Electrical Power Plant Fire," *NFPA Journal*, March/April 1993 (with Casey C. Grant);  
"Major High-Rise Fires Reveal Protection Needs," *NFPA Journal*, September/October 1992;  
"Fire Storm '91 Fire Case Study," May 1992;  
"Twenty-Five Die in Food Plant Fire," *NFPA Journal*, January/February 1992;  
"High-Rise Fire Claims Three Philadelphia Fire Fighters," *NFPA Journal*, September/October 1991;  
"Stephan Bridge Road Fire Case Study," April 1991;  
"Board and Care Fire Claims Four," *Fire Command*, December 1990;  
"Earthquake Tests Disaster Response," *Fire Command*, December 1989;  
"The Crash of United Flight 232," *Fire Command*, October 1989 (with Mark T. Conroy);  
"Black Tiger Fire Case Study," July 1989;  
"Los Angeles High-Rise Bank Fire," *Fire Journal*, May/June 1989;  
"The Hackensack Fatalities," *Fire Command*, October 1988;  
"Fact Sheet - Interstate Bank Building Fire," *Fire Command*, July 1987;  
"Fatal Live Fire Training Incident," *Fire Command*, May 1988;  
"Fact Sheet - Fire Fighter Fatality Training Incident," *Fire Command*, December 1987;  
"Triple Tragedy in Detroit," *Fire Command*, July 1987;  
"97 Die in Arson Fire at Dupont Plaza Hotel," *Fire Journal*, May/June 1987;  
"56 Die in English Stadium Fire," *Fire Journal*, May 1986;  
"The Bradford, England, Stadium Fire," *Fire Command*, April 1986;  
"Fire at the Prudential Building, Boston, MA," *Fire Command*, March 1986 (with Greg Kyte);  
"Fire Fighter Dies in Ammonia Explosion," *Fire Command*, February 1985;  
"Explosion in Cold Storage Kills Fire Fighter," *Fire Journal*, March 1985;  
"New York Dwelling Fire Kills Family of Seven," *Fire Journal*, November 1984;  
"The Rural Fire Picture: A Hidden Story," *Fire Journal*, September 1984;  
"Partners in Fire Investigation," *Fire Journal*, July 1984;  
"Scores Die in Tank Fire Boilover," *Fire Service Today*, June 1983;  
"Twelve Die in Fire at Westchase Hilton Hotel," *Fire Journal*, 1983;  
"Six Die in Wisconsin Group Home Fire," *Fire Journal*, January 1984;

## Audio-Visual Projects

Technical Advisor to NFPA Video Projects:

- "Countdown to Disaster"
- "Fire Power"
- "Fire Storm '91 Case Study"
- "Fire in the Hills: The Oakland Story"
- "Four Hotel Fires: Lessons Learned" (slide package)

Producer, USFA Investigative Protocols:

- "Conducting Mobile Home Investigations and their Analysis"
- "Conducting Thermal Insulation Investigations and their Analysis"
- "Conducting Electrical Fire Investigations and their Analysis"

# T.J. Klem & Associates

CONSULTING FIRE PROTECTION ENGINEERS

Thomas J. Klem

## Selected Significant Fire Investigations

ATLANTA BOARD AND CARE FIRE, July 1993  
THAILAND TOY FACTORY FIRE, May 1993  
LOS ANGELES APARTMENT HOUSE FIRE, May 1993  
WORLD TRADE CENTER FIRE, February 1993  
WEYMOUTH, MA., HOSPITAL FIRE, January 1993  
WINDSOR CASTLE FIRE, December 1992  
NEWARK COGENERATION FACILITY FIRE, December 1992  
TWA AIRCRAFT FIRE AT KENNEDY AIRPORT, July 1992  
SPOKANE, WA., WILDLAND FIRE, October 1991  
OAKLAND/BERKLEY HILLS CONFLAGRATION, October 1991  
IMPERIAL FOODS PROCESSING PLANT FIRE HAMLET, NC., September 1991  
ONE MERIDIAN PLAZA, THREE FIRE FIGHTER FATALITIES, February 1991  
FATAL BOARD AND CARE FIRE, BESSEMER, ALABAMA, September 1990  
GRAYLING, MI., WILDLAND FIRE, May 1990  
SOCIAL CLUB FIRE, BRONX, NEW YORK, March 1990  
ELDERLY HOUSING FIRE, ROANOKE, VA., December 1989  
THE LOMA PRIETA EARTHQUAKE, SAN FRANCISCO BAY AREA, CA., October 1989  
NORFOLK, VA, NURSING HOME FIRE, October 1989  
CRASH OF UNITED AIRLINES FLIGHT 232, SIOUX CITY, IA, July 1989  
BOULDER, CO., WILDLAND FIRE, July 1989  
ATLANTA OFFICE BUILDING FIRE, June 1989  
HOSPITAL FIRE, ST. JEROME, QUEBEC, January 1989  
FIVE FIRE FIGHTER FATALITIES, HACKENSACK, NEW JERSEY, July 1988  
FIRST INTERSTATE BANK BUILDING FIRE, LOS ANGELES, CA., May 1988  
FATAL LIVE TRAINING EXERCISE, MILFORD, MICHIGAN, October 1987  
THREE DETROIT FIRE FIGHTER FATALITIES, March 1987  
DUPONT PLAZA HOTEL FIRE, SAN JUAN, PUERTO RICO, December 1986  
FIREWORKS EXPLOSION, JAFFREY, NH., September 1986  
PRUDENTIAL HIGH-RISE BUILDING FIRE, BOSTON, MA., January 1986  
SOCCER STADIUM FIRE, BRADFORD, ENGLAND, May 1985  
HOTEL FIRE, WAUKEGAN, IL., December 1984  
FIRE FIGHTER FATALITY, SHREVEPORT, LA., September 1984  
ROOMING HOUSE, BEVERLY, MA., July 1984  
CONFLAGRATION, PHILADELPHIA, PA., May 1984  
CRUISE SHIP FIRE, PORT CANAVERAL, FL, March 1983  
HOTEL FIRE, DAYTON, OH., November 1983  
HOTEL FIRE, FORT WORTH, TX., June 1983  
AIR CANADA FIRE, CINCINNATI, OH., June 1983  
HOTEL FIRE, EAU CLAIRE, WI., February 1983  
FUEL STORAGE BOILOVER, CARACAS, VENEZUELA, December 1982  
STOUFFER'S HOTEL FIRE, HARRISON, NY., May 1980  
BEVERLY HILLS SUPPER CLUB FIRE, SOUTHGATE, KY., May 1977

**Thomas J. Klem, MScFPE  
Fire Protection Engineer  
24 Robert Road  
Stoughton, MA 02072  
(781) 344-1115**

With more than 25 years of experience in fire investigations, prevention, suppression, and engineering loss analysis, Thomas J. Klem is a seasoned fire protection expert, author of technical articles, and lecturer. Now president of his own fire protection engineering firm, Mr. Klem previously served in key positions of some of the most prestigious fire protection organizations in the country. He is experienced in the analysis of fire and emergency operations, including large building complexes, to assess fire protection design and performance. His analyses are accompanied by recommendations to improve the overall performance and fire code requirements of similar structures. Mr. Klem demonstrates a command of technical report-writing, utilizing detailed assessment, analysis and documentation of complex technical variables.

Mr. Klem has conducted the investigations and analyses of many significant U.S. fire incidents including such major events as the Beverly Hills Supper Club fire, the MGM Grand and Dupont Plaza Hotel fires, the One Meridian Plaza high-rise office building fire, and the World Trade Center explosion and fire.

Since 1994, Mr. Klem has provided expert consultation on a variety of fire protection issues related to fire cause, ignition and spread, and involving diverse occupancies/structures such as highly protected risks, commercial aircraft and industrial occupancies.

Until 1994, Mr. Klem directed the fire investigations department at the National Fire Protection Association. For more than 10 years, he was instrumental in this role in advancing state-of-the-art fire modeling applications for fire investigations and training of the engineering staff in fire investigative protocols. Prior to joining the NFPA, Mr. Klem was a fire officer with the Prince George's County, Maryland, Fire Department, where he had responsibility for fire prevention, building and fire code interpretations, fire suppression and administration, and was a fire investigations officer. For six years Mr. Klem managed the United States Fire Administration's major fire and applied research fire study programs and developed national fire investigative protocols for electrical fires, fires involving thermal insulation, and manufactured home fires.

Mr. Klem is a graduate of the University of Maryland. He received his master of science degree in Fire Protection Engineering at Worcester Polytechnic Institute.

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## T. J. Klem & Associates

CONSULTING FIRE PROTECTION ENGINEERS  
CERTIFIED FIRE INVESTIGATORS

Thomas J. Klem  
email: tjkle@aol.com

### THOMAS J. KLEM EXPERT TESTIMONY 1995-2002

1. Oldham, et al., v. MHTC Jackson Co. (Missouri) Circuit Court, CV 89-13327.
2. United States v. Johnson, United States District Court for the Middle District of Alabama, Eastern Division, Docket No. 95-00123. (Note: appointed by the court as fire expert and submitted a technical report).
3. O'Neill v. USAir, United States District Court, Central District of California, CV 92-0475.
4. Handy, et al., v. First Interstate Bank Building, Los Angeles Superior Court, C 690948.
5. Cogliano v. DiversiTech, et al., Commonwealth of Massachusetts, Middlesex Superior Court., 95-2792.
6. Sunland Beef, et al., v. Dupps, Superior Court of Arizona, CV 95-08167.
7. John Doe, et al., v. Don Younger, United States District Court, Eastern District of Kentucky. Civil action No. 91-187.
8. Judy Violette and Holyoke Mutual Insurance Company v. Dennison Manufacturing Company, Middlesex Superior Court, Cambridge, MA Civil Action No. 94-5995.
9. O'Brian Cogeneration v. Hawk-Siddeley Power Engineering et al., Superior court of New Jersey, Essex County. Docket No. EXL-L-3218-95, (June, 1997).
10. Minehan, Adm. V. Rapids Realty Co. and Peter Elliot & CO., Civil Action No. 95-5039C, Suffolk, MA ss.
11. Ellen Tracy, et al, v. J&R Sprinkler Co, State of VT, Bennington County, ss., Benington Superior Ct. Docket SO394-95 Bss.

12. Duncan v. House of Lloyd, State of MI, Circuit Court for the County of Berrien, Case No. 91-2340-NP-T (Deposition, Feb., 1998).
13. O'Brian Cogeneration v. Hawk-Siddeley Power Engineering et al., Superior court of New Jersey, Essex County. Docket No. EXL-L-3218-95, (February, 1998).
14. Duncan v. House of Loyds, State of MI, Circuit Court for Berrien County, Case 91-2340-NP-T (Hearing and testimony on spoliation issues), May, 1998.
15. Niddrie v. Travelers, Circuit Court of Cook County, IL, No. 92 L 14074, April, 1998, Deposition.
16. National Transportation and Safety Board (NTSB) Hearing on FEDEX Fire Incident, Newberg, NY, Deposition, May, 1998.
17. Niddrie v. Travelers, Circuit Court of Cook County, IL, No. 92 L 14074, October, 1998, Trial.
18. Bob's Auto Care v. Ford Motor Company, Norfolk County Superior Court, 97-01757, Deposition, October, 1998.
19. Green v. Hartford Insurance Company, The State of New Hampshire, Superior Court Rockingham, SS, Case 98-C-49, Deposition, December, 1998.
20. Jonathan Edwards v. Cynthia Charest of behalf of the Estate of Larry Charest, the State of NH, Superior Court, No. 98-C-0038, Deposition, 1999.
21. William Faulkner d/b/a Natural Designs and Landscaping v. Ansul Fire Protection, State of NC, County of Cumberland, Superior Court, No. 97 CV8621, Deposition, July, 1999.
22. Francis Ford et al., v. Emro Marketing Co. et al., State of Ohio, Franklin County, Superior Court, No. 98 CVC 03-2203, Deposition, August, 1999.
23. Truck Insurance Exchange v. Time Warner Operations, Inc. et al., Superior Court of the State of CA, or the County of Orange, Combined Cases No. 77 93 66 and 79 04 46, Trial, October, 1999.
24. Dale Penney v. Forster, Inc, Superior Court of State of Maine, CV-98-076, December, 1999.
25. William Cook, et al. v. Tidemill Farms, Inc., Hancock, VT, Superior Ct. CV 99-83. August, 2000.



26. Tolentino et al. v. United Parcel Service and Consolidated Rail Corp., U.S. District Court, Civil Action 98 10369-MEL. Depositions, August and September, 2000.
27. Duro Industries, Inc. et al v. Sherle Wagner International, United States District Court, District of MA., CV 12216 RWZ. Deposition, December, 2000.
28. Bob's Auto Care v. Ford Motor Company, Norfolk County Superior Court, 97-01757, Trial, February, 2001.
29. Tolentino et al. v. United Parcel Service and Consolidated Rail Corp., U.S. District Court, Civil Action 98 10369-MEL. Trial, November, 2001.
30. Thom Realty Corporation v. Baker Fire Equipment Co., Inc. Middlesex Superior Court Civil Action No. 99-5144. Deposition, January, 2002.
31. Oroujo v. O'Niel, Rockingham County, NH, Docket #OO-C-878. Deposition, January, 2002.
32. Arbella Mutual Insurance Co. V. Paul Smith and Debra Smith, Norfolk County Superior Court, Docket No. 0001356, Trial February, 2002.
33. The Shantigar Foundation v. Bear Mountain Builders and Cove Builders, Franklin County, MA Superior Court, Docket No. 00106, Trial May, 2002.
34. Testo v. Toyotomi and Home Depot, Superior Court, Judicial District of Fairfield at Bridgeport, CV 99-0360735 S, Deposition, June, 2002.
35. Buckley, et al v. General Motors Corporation et al, Circuit Court of the County of St. Louis Missouri, Case # 00CC-003492 H CV, Deposition, July, 2002.
36. Kaufman v. Ming International and GE-Ray Fabrics, United States District Court for the District of Vermont, Civil Action No. 1: 01-CV-59, Deposition, July, 2002.
37. Trans North Turbo Air v. North 60 Petro, Supreme Court of the Yukon Territory, S.C. No. 00-A-0174, Trial, July, 2002.
38. Kaufman v. Ming International and GE-Ray Fabrics, United States District Court for the District of Vermont, Civil Action No. 1: 01-CV-59, Deposition, August, 2002.

39. Commonwealth v. Thomas Crouse, Commonwealth of Massachusetts Middlesex Superior Court Criminal Business, No. 2001-0733, Trial October, 2002.

40. United States District Court, District of Connecticut, Albany Insurance v. United Alarm Service et al, Case No. 3:00CV 1193 (AWT). Deposition February, 2003.

41. Nicholas Jace and Scottsdale Insurance v. Hampshire Fire Protection Co., Rockingham County (NH) Superior Court No. 02-C-58, Deposition June, 2003.



# **EXHIBIT “2”**

Bay State Inspectional Agency  
220 Winyah Lane  
PO Box 1379  
Vineyard Haven, MA 02568  
**James J. Rogers**

Phone 508-693-4124

Fax 508-693-8322

### **Investigation Report**

#### **History of Investigation**

On , Monday, April 24, 2006 I met with Mr. Thomas Klem of T.J. Klem & Associates and Attorney Gordon L. Sykes, of Morrison, Mahoney LLP in reference to a sprinkler system and fire alarm malfunction that had occurred on January 19, 2003 in a motel building known as the Residence Inn, located on 181 Faunce Corner Road in the Town of North Dartmouth, Massachusetts. The nature of my involvement was to review the actions and responsibilities of TEC Alarm Company relative to this incident.

#### **Observations and Facts**

1. The Residence Inn is a newly constructed motel located at 181 Faunce Corner Road in the Town of North Dartmouth, Massachusetts.
2. This hotel had an automatic sprinkler system and an automatic fire alarm system installed during the construction process.
3. The fire alarm system was installed by Paquette Electric and TEC Alarm Company.
4. Scott R. Duplisea is an employee of TEC Alarm Company and was responsible for the fire alarm system at the subject motel.
5. M.G.L. C. 141 requires that persons performing the type of work that Mr. Duplisea performed at the subject motel, in the Commonwealth of Massachusetts, be licensed by the Board of State Examiners of Electricians.
6. Mr. Duplisea does not hold a license as issued by the Massachusetts Board of State Examiners of Electricians.
7. M.G.L. C. 143, s. 3L mandates that persons performing work as performed by Mr. Duplisea file an electrical permit form and request the necessary electrical inspections.

Neither Mr. Duplisea, nor TEC Alarm Company did this for the work performed at the subject motel.

8. 780 CMR, the Massachusetts State Building Code defines the requirements for the installation of fire alarm systems in buildings such as the subject motel.
9. Among the requirements found in Chapter Nine of the Sixth Edition of the Massachusetts State Building Code are requirements for engineered drawings and submission to the Head of Fire Department and the Building Official prior to commencing work on the installation of a fire alarm system. Neither Mr. Duplisea, nor TEC Alarm Company did this prior to specifying and installing a fire alarm system in the subject motel.
10. M.G.L. C. 148 and 527 CMR 10.00 address the review and acceptance criteria by the Heads of Fire Departments in Massachusetts.
11. NFPA 72 is accepted in Massachusetts by reference only and it is not formally adopted as a complete regulation.
12. Mr. Duplisea allegedly performed a 100 % system test, however, there is no record of that test being performed and he did not print out the alarm event log upon completing that test.

### **Conclusions**

Based upon the above listed evidence and facts the following conclusions can be made.

Mr. Duplisea is not licensed in Massachusetts to perform the work that he admitted to performing at the Residence Inn located in North Dartmouth, Massachusetts. If he had been properly licensed in Massachusetts he would have to be familiar with Massachusetts laws and regulations in order to pass the required examination for licensure. Because he is not familiar with those requirements he has made several assumptions throughout his deposition testimony that are not necessarily correct in Massachusetts, including his rather novel description of the fire department notification system that the Fire Chief in North Dartmouth requires.

Had the work that Mr. Duplisea performed been properly permitted and inspected then the wiring of the system monitoring devices would have had another level of review and any problems may have been rectified prior to becoming a problem.

Mr. Duplisea has not presented any verification that anyone changed any wiring in the system after he left the premises in April of 2002.

I reserve the right to amend or append this report upon the introduction of any additional evidence or findings in this case.

Submitted by:

James J. Rogers,  
President, Bay State Inspectional Agency

Documents relied upon as part of this summary report:

NFPA 72, the National Fire Alarm Code  
780 CMR, The Massachusetts State Building Code  
M.G.L. C.s 141, 143, and 148  
237 CMR Regulations of the Board of State Examiners of Electricians  
527 CMR Regulations of the Board of Fire Prevention Regulations

James J. Rogers  
220 Winyah Lane  
P.O. Box 1379  
Vineyard Haven, MA 02568

Home: 508-693-4124

Work: 508-693-4124

**OBJECTIVE:**

Consultant Position Electrical and Fire Related Profession

**EXPERIENCE:**

November 1996 to Present

Private Contractor, Consultant

October 1989 to October 1996

Executive Secretary - Board of State

Examiners of Electricians - Commonwealth of Massachusetts

January 1977 to October 1989

Owner/Operator electrical contracting company

**TRADE CERTIFICATION:**

Journeyman Electrician February 25, 1973

Master Electrician December 27, 1977

ITT Certified Technician Telephony & Key Systems October 26, 1984

Nationally Certified Electrical Inspector April 21, 1990

NAFI Certified Fire & Explosion Investigator December 10, 2002

Massachusetts Certified Fire Investigator December 20, 2002

IAAI Certified Fire Investigator March 15, 2003

**TRADE RELATED EXPERIENCE:**

January 1990 to 1996

Executive Committee National Board of Electrical Examiners working with multiple states to standardize certification for electricians in all states

June 1982 to present

Town of Tisbury and Town of West Tisbury Wiring Inspector and Assistant Wiring Inspector

Wiring Inspector Town of Oak Bluffs 8/92 to present

September 1984 to present

Instructor for 300 hour, 100 hour and 15 hour required electrical classes

January 1998 to June 2000

Instructor for college level electrical and fire alarm courses at Franklin Institute of Boston

December 1991 to December 1993

Member of Executive Board, Paul Revere Chapter, IAEI

January 1993 to January 2003

Secretary/Treasurer Cape & Islands Chapter, IAEI

October 1993 to 2003

Principal member of the NFPA 303 Committee, standard for docks and marinas.

October 1996 to October 2002

Alternate member NFPA 70, CMP 12, Representing the International Association of Electrical Inspectors

October 2002 to Present

Principal member NFPA 70, CMP 4, Representing the International Association of Electrical Inspectors

September 1996

Elected 4th Vice President to the Eastern Section of the International Association of Electrical Inspectors, Served term as President 2001

January 1997 to present

Treasurer for the Massachusetts Electrical Code Advisory Committee to the Commonwealth of Massachusetts, Board of Fire Prevention Regulations

#### TRADE RELATED AFFILIATIONS:

Active member Municipal Inspectors Association

Active member IBEW Local 103

Active member NFPA Electrical Section

Honorary member MECA

Member Massachusetts Fire Prevention Association

Active Member International Association of Arson Investigators

Active Member National Association of Fire Investigators

#### OTHER ADMINISTRATIVE EXPERIENCE:

Town of Tisbury Finance Committee 3 years

Town of Tisbury Board of Health 5 years

Town of Tisbury Board of Appeals 3 years

Town of Tisbury Fire Department 34 years

Current rank Assistant Chief

#### EDUCATION:

Franklin Institute of Boston, Boston MA, Associate's Degree Electrical Engineering, 1999

Franklin Institute of Boston, Boston MA Applied electricity and electronics, 1971

Martha's Vineyard Regional High School College Prep Course, 1970

Continuing education consisting of code classes and seminars conducted by various groups including NFPA, IAAI and IAEE

REFERENCES: Available upon request

James J. Rogers  
220 Winyah Lane  
P.O. Box 1379  
Vineyard Haven, MA 02568

Home: 508-693-4124

Work: 508-693-4124

**OBJECTIVE:**

Consultant Position Electrical and Fire Related Profession

**EXPERIENCE:**

November 1996 to Present Owner/Operator consulting and contracting companies

- Perform electrical inspections for municipalities and privately
- Perform fire investigations
- Perform electrical consulting and research
- Perform electrical installations

October 1989 to October 1996 Executive Secretary - Board of State Examiners of  
Electricians - Commonwealth of Massachusetts

**Personnel Responsibilities:**

- Work assignment and oversight
- Recommendations on employee advancement, hiring and firing
- Consult with employees regarding their ideas and problems relating to office functions

**Office Responsibilities:**

- Review all applications for examination and licensure to ascertain their proper trade qualifications for licensure
- Interpret electrical code, Board regulations, general laws, and other state regulations when asked to do so by Board investigators, local wiring inspectors, consumers, electricians, lawyers, Attorney General's Office, legislative offices and other state agencies
- Assist the State Fire Marshal in investigations of fires considered to be electrical in nature either directly or through delegation to Board Investigators
- Prepare and keep all Board agendas and minutes
- Develop regulations and legislation for review and approval by the Board to coincide with changes in the industry
- Follow all legislation submitted and report to the Board any legislation which would effect the electrical industry
- Initiate hearing notices and write final decisions for Board hearings regarding licensee misbehavior or appeals of local inspectors code interpretations
- Attend trade related meetings to speak on Board policy and code enforcement and to listen to industry concerns
- Review educational providers to ascertain that they are teaching the proper curriculum

- and review any new requests to provide education to make recommendations to the Board for approval or disapproval
- Investigate situations in the field regarding violations of Massachusetts laws, codes and regulations
- Attend seminars and other state Board meetings so as to remain current with all pertinent changes effecting the electrical industry
- Work with testing service in development and oversight of examinations
- Establish procedures for licensing and examination of fire warning and security system installers
- Establish new subcommittee to review and rewrite the regulations for the Commonwealth of Massachusetts, Board of Fire Prevention Regulations relative to fire warning systems

January 1977 to October 1989

Owner/Operator electrical contracting company

Personnel Responsibilities:

- Hiring and firing of all personnel
- Job assignment and layout
- Consult with employees about personal and work related problems

Office Responsibilities:

- Construct all bills and estimates
- Do all plan reading and consult with engineers or architects
- Prepare letters and reports
- Prepare all material orders
- Coordinate all business functions

#### TRADE CERTIFICATION:

Journeyman Electrician February 25, 1974

Master Electrician December 27, 1977

ITT Certified Technician Telephony & Key Systems October 26, 1984

Nationally Certified Electrical Inspector April 21, 1990

NAFI Certified Fire & Explosion Investigator December 10, 2002

Massachusetts Certified Fire Investigator December 20, 2002

IAAI Certified Fire Investigator March 15, 2003

#### TRADE RELATED EXPERIENCE:

January 1990 to 1996

Executive Committee National Board of Electrical Examiners working with multiple states to standardize certification for electricians in all states

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Town of Tisbury and Town of West Tisbury

Wiring Inspector and Assistant Wiring Inspector

Wiring Inspector Town of Oak Bluffs 8/92 to present

September 1984 to present Instructor for 300 hour, 100 hour and 15 hour state required Electrical classes



December 1991 to December 1993  
Member of Executive Board, Paul Revere Chapter, IAEI  
January 1993 to January 2003  
Secretary/Treasurer Cape & Islands Chapter, IAEI  
October 1993 to present  
Principal member of the NFPA 303 Committee, the standard for docks and marinas.  
October 1996 to October 2002  
Alternate member NFPA 70, CMP 12, Representing the International Association of Electrical Inspectors  
October 2002 to Present  
Principal member NFPA 70, CMP 4, Representing the International Association of Electrical Inspectors  
October 2000 Elected President to the Eastern Section of the International Association of Electrical Inspectors term expires December 31, 2001  
January 1998 to present  
Instructor of college level electrical theory and fire alarm design courses at Franklin Institute of Boston  
October 1998 to present  
Instructor of national level electrical training and update courses for the International Association of Electrical Inspectors  
September 1992 to present  
Instructor of electrical theory and code for IBEW Local 103, NJATC

**TRADE RELATED AFFILIATIONS:**

Member IBEW, Local 103 Active Inspector member and Secretary/Treasurer of Cape & Islands Chapter of IAEI, Active member Municipal Inspectors Association, Active member NFPA electrical section, Active member MECA, Member Massachusetts Fire Prevention Association, Member International Association of Arson Investigators, Member National Association of Fire Investigators

**OTHER ADMINISTRATIVE EXPERIENCE:**

Town of Tisbury Finance Committee 3 years  
Town of Tisbury Board of Health 5 years  
Town of Tisbury Board of Appeals 3 years  
Town of Tisbury Fire Department 34 years  
Current rank, Assistant Chief

**EDUCATION:**

Franklin Institute of Boston, Boston Ma.  
Associate's Degree in Electrical Engineering, June 1999  
Martha's Vineyard Regional High School  
College Prep Course, 1970  
Continuing education consisting of code classes and seminars conducted by various groups including NFPA, IAAI and IAEI

**Testimony Cases and Dates**

**Christopher Penrod vs. Red Kap Industries and Diamond Uniform Rental Service, Inc. Docket No. 01-0011 Deposition Testimony taken by Robert J. Roughsedge, Esq. on August 17, 2005**

**James McLaughlin and Elanor Zenis vs. John Ehwa, C.A. No. 98-060 Trial Testimony in Middlesex Superior Court, Lowell, Massachusetts on June 18, 2004.**

**James McLaughlin and Elanor Zenis vs. John Ehwa, C.A. No. 98-060 Deposition Testimony taken by Wayne DiCarlo, Esq. on June 2, 2004**

**Francine M. Fletcher, et al. v Stephen Littleton, C.A. No. 95-0867B Trial Testimony in Plymouth Superior Court, Brockton, Massachusetts on November 17 and 18, 2003.**

**Palmer Foundry, Inc. v Delta-HA, USDC No. 02-30003-MAP, Deposition Testimony taken by Mark Lavoie, Esq. on Wednesday, November 5, 2003**

**Peter & Karen Rhoten vs. Robert B. Bechtold and others, Civil Action No. 00-cv-12307-MBB. Trial Testimony in Federal Court in Boston on October 7, 2003.**

**Chubb Group of Insurance Companies, Subrogee of Mr. Julius Friedlaender vs. Bunker Electric, Inc. and Wally Bunker DBA Bunker Electric Deposition Testimony taken by Mark Lavoie, Esq. on Wednesday, April 9, 2003**

**Francine M. Fletcher, et al vs Stephen Littleton Deposition Testimony taken by Michael J. Mazurick, Esq. on Wednesday, February 19, 2003**

**Peter Rhoten and Karen Rhoten for Exoneration from or Limitation of Liability, Deposition by David Farrell, Jr., Esq. and Robert E. Collins, Esq., August 29, 2002**

**Elmer and Ann Silva vs. Black and Decker, Deposition by William N. Clark, Jr., Esq. and Scott J. Tucker, Esq., April 11, 2000**

**Commonwealth vs. Rudolph Walker, Suffolk Superior Trial, Case No. 99-10800 ADA Timothy A. Malec February 4, 2000**

**Tobey et al vs Triglia, Deposition on November 4, 1999**

**Wayne Devine vs. Stephen F. Littleton, etc. Deposition by Edward Mahoney on August 24, 1999**

**Commonwealth vs. Rudolph Walker, Suffolk Superior Grand Jury, Case No. 99-10800 ADA Timothy A. Malec July 20, 1999**

**Commonwealth vs. Charles Truman, Plymouth Superior Court, Case No. 96860-96832 Trial Testimony, April 4, 1999**

**Melissa Banta vs. Commonwealth Electric, Deposition by Timothy J. Daly and David A. McLaughlin on October 28, 1998**

**Francine M. Fletcher vs. Stephen F. Littleton, Norfolk Superior Court Hearing, September 29, 1998**

**Dorothy O'Neill vs. Mary Masi, Deposition by Robert J. O'Neill, September 3, 1998**

**Travelers, Dean College vs. Elisa M. Troisi, Deposition by Timothy Kenneally, June 8, 1998**

**Francine M. Fletcher vs Stephen Littleton, Deposition by Jeffery Melick, Esq. and Michael Rezendes, Esq., March 3, 1998**

**Francine M. Fletcher vs Stephen Littleton, Deposition by Jeffery Melick, Esq. and Michael Rezendes, Esq., February 4, 1998**

**Francine M. Fletcher vs Stephen Littleton, Deposition by Jeffery Melick, Esq. and Michael Rezendes, Esq., January 23, 1998**

**Commonwealth vs. Francois Clermont Case No. 93-11002, Suffolk Superior Court Testimony January 21, 22, 1997**

**Commonwealth vs. Jonathan Taylor, Case No. 945-30-31-32, Plymouth County Superior Court Testimony, November 1995**

**Herbert P. Anderson vs. Loring Paul Fluke, Deposition by Lauri J. Horkitz, Esq. and John Ryan, Esq. on February 14, 1995**

**Commonwealth of Massachusetts, Suffolk County Superior Court, Grand Jury No. SUCR93-11002, Deaths of Sophie, Moise and Marchinson Bellanton Testimony on April 15, 1994**

**Commonwealth of Massachusetts, Suffolk County Superior Court, Grand Jury No. SUCR93-11002 Testimony on November 22, 1993**

Other Training and Education

Electrical Related Training

NFPA Electrical Code Workshop March 28 & 29, 1983

NFPA Electrical Code Workshop September 15 & 16, 1986

IAEI 1987 Code Changes Seminar March 7, 1987

IAEI Annual Code Workshop October 17, 18 & 19, 1988

IAEI Annual Code Workshop September 11, 12, & 13, 1989

IAEI Code Changes Seminar December 9, 1989

IAEI Annual Code Workshop September 10, 11, & 12, 1990

IAEI Annual Code Workshop October 7, 8, & 9, 1991

IAEI Grounding Seminar March 23, 1991

IAEI Annual Code Workshop September 20, 21, 22 & 23, 1992

IAEI Annual Code Workshop October 10, 11, 12 & 13, 1993

IAEI Annual Code Workshop October 2, 3, 4 & 5, 1994

IAEI Annual Code Workshop September 17, 18, 19 & 20, 1995

IAEI Annual Code Workshop September 15, 16, 17, & 18, 1996

IAEI Annual Code Workshop September 7, 8, 9, & 10, 1997

IAEI Annual Code Workshop October 19, 20, 21 & 22, 1998

IAEI Annual Code Workshop October 3, 4, 5 & 6, 1999

IAEI Annual Code Workshop October 1,2,3 & 4, 2000

IAEI Annual Code Workshop October 7,8,9 & 10, 2001

IAEI Annual Code Workshop October 6,7,8 & 9, 2002

IAEI Annual Code Workshop September 7, 8, 9, 10, 11, & 12, 2003

IAEI Annual Code Workshop September 30, October 1, 2, & 3, 2004

IAEI Annual Code Workshop September 25, 26, 27 & 28, 2005

National Certification as Electrical Inspector General and 1 & 2 Family by examination April 21, 1990

Appointed to the NFPA 303 committee on Marinas and Boatyards as an electrical expert October 15, 1993

Appointed as an Alternate Member to NFPA 70, CMP 12 representing IAEI on October 2, 1996

Appointed as Principal Member to NFPA 70, CMP 4 representing IAEI on October 3, 2002

Regular monthly meetings and workshops of the Municipal Wiring Inspector's Association and IAEI.

#### Fire Related Training

Massachusetts Fire Academy Course on Sprinklers March 16, 1975

Massachusetts Fire Academy Course on Flammable Liquids October 5, 1980

Massachusetts Fire Academy Course on Mini Course Combined Training October 23, 1983

Massachusetts Fire Academy Course on Tanker Shuttle/Hydraulics April 8, 1984

Massachusetts Fire Academy Course on Protective Breathing November 18, 1984

Certified Scott Air-Pak Field Repair Technician October 6, 1984

Massachusetts Fire Academy Course on Tactics & Strategy February 10, 1985

Massachusetts Fire Academy Course on Pumps & Hydraulics May 4, 1986

Massachusetts Fire Academy Course on Hazardous Materials April 30, 1989

Massachusetts Fire Academy Course on Hazardous Materials March 11, 1990

Massachusetts Fire Academy Certified by written and practical examination Firefighter I/II November 18, 1992

IAAI Reverse Conspiracy & Gas and Oil Heating Equipment Fires November 19, 1992

IAAI Electrical Fires & Flashover March 23 & 24, 1995

IAAI Electrical Fires: An Investigator's Viewpoint, November 21, 1996

IAAI Post Fire Investigation of Electrical Components, January 17, 2002

IAAI Safety & Health for Fire Investigators, January 15, 2004

IAAI The Scientific Method for Fire and Explosion Investigation, January 29, 2006

Massachusetts Fire Academy Certified by written examination Fire and Arson Investigation  
December 11, 13, 15, 19, and 21, 1995

Massachusetts Fire Academy Certified by written examination Firefighter I Trainer  
September 29, 1996

Massachusetts Fire Academy Course on Rural Water Supply, October 1999

Massachusetts Fire Academy Course on Fire Report Preparation, April 2000

In service training as department engine company officer on a regular basis, including  
assisting as a fire investigator since 1978 and appointment as department investigator in  
July of 1995. Promoted to Assistant Chief July 1, 2002.

Regular monthly meetings of the Board of Fire Prevention Regulations and monthly  
meetings and workshops of the IAAI

James J. Rogers  
220 Winyah Lane  
P.O. Box 1379  
Vineyard Haven, MA 02568

**FEE SCHEDULE**

Consulting:	\$90 per hour
Deposition Testimony:	\$135 per hour
Court Testimony:	\$160 per hour